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BULLETIN OF THE TORREY BOTANICAL CLUB.

Vol. VI., Nos. 19 & 20.]

[New York, July & August, 1876.]

§ 102. **Ferns.**—We have received Mr. Davenport's Catalogue of the Davenport Herbarium, Mass. Hort. Soc., corrected to Ap. 3d, 1876; and Mr. Wm. Edwards' Catalogue of North American Ferns, May, 1876, corrected by Prof. Eaton. Mr. Edwards' address is South Natick, Mass. He will mail his useful catalogue for 25 cents a dozen. This list comprises 132 species and 20 varieties, of which 49 species and 2 varieties are peculiar to North America, *i. e.*, America north of Mexico. Mr. Davenport's list has 124 species and 26 varieties. Mr. Davenport, it will be seen admits more varieties than Prof. Eaton does in Mr. Edwards' catalogue; in the latter, for example, *Asplenium Filix-femina* has only the variety *Michauxii*, while Mr. Davenport gives also *angustum*, *cristata* [*um?*] and *luciniatum*. The former does not seem to recognize *Botrychium simplex*, var. *bipinnatifidum*. In connection with fern variations, perhaps the interest felt in this subject may justify us in mentioning that Mr. A. H. McKay, of Pictou, N. S., has found a variety named provisionally by Prof. Lawson, *Cystopteris fragilis*, var. *McKayii*. Mr. McKay finds *Aspidium Filix-mas*, Swartz, in that quarter.

Mr. Hall writes: If any of the Club ever take a trip in search of *Cheilanthes tomentosa*, the following extract from a letter from Rev. D. R. Shoop may do some good. I do not think it will do harm to publish the locality: "Where I gathered *Cheilanthes tomentosa* was at Painted Rock on the French Broad River—just above the North Carolina and Tennessee line. Hot Springs, close by, is a good place to stop, a summer resort; and I think one could not miss the *Cheilanthes* on the rocks up the river—just where, I cannot say. Doubtless it could be found nearer, in Virginia or Kentucky."

Mr. L. A. Millington writes from Glens Falls: Two different plants of fragrant *Aspidium Noveboracense*, Swartz, were found in this vicinity last summer. I have roots in my garden brought from the north, which have deliciously fragrant fronds thus far.

§ 103. **Publications.**—1. *Botany of California*. The first volume is now ready, price six dollars, which is extremely low. Copies may be obtained on application to Sereno Watson, Botanic Garden, Cambridge, Mass. As the weight is nearly five pounds, it cannot be transmitted by mail. The present volume comprises the Polypetalæ by W. H. Brewer and Sereno Watson, and the Gamopetalæ by Asa Gray. As the Legislature of California has since 1874 made no appropriations to continue the Geological Survey of the State, this volume would have remained unpublished had not a few citizens of San Francisco contributed a sum sufficient to insure its publication. The proceeds of the sale of this will go to aid the publication of the second volume, which is intended to contain the remaining exogenous (*Apetalæ*, *Gymnospermæ*), the endogenous, and the cryptogamous orders, with index, etc. All botanists will feel grateful for what has been accomplished of this very important

work, and will look longingly for its completion. The difficulty and interest of the task may be understood from the fact that not only has there been here for the first time attempted a Flora of California, comprising 150,000 or 160,000 square miles, but that for this purpose it has been found necessary to work up the whole eastern slope of the Sierra Nevada, and of the ranges adjacent to it on the east, from Arizona to Northern Nevada, and of Southern Oregon.

—2. *Flora of South-western Colorado*, by T. S. Brandegee, Depart. Interior, U. S. Geol. and Geog. Survey of the Territories. After a general description of the flora and its distribution, Mr. Brandegee gives a list of the plants not included in Porter and Coulter's Catalogue. There are quite a number of new species (several *Astragali* of course) described by Dr. Gray, and Dr. Englemann. The list of Musci and Hepaticæ by Mr. Rau has appeared in the BULLETIN, May, 1876, with the exception of a new species here described by Mr. Austin, *Dicranum (Campylopus) Rauei*. We notice that *Weisia* here as in our list is spelled *Weissia*. We believe, as Mr. Rau has pointed out to us, that one *s* is the proper form.—3. *Notes on Agave*, by Dr. Geo. Engelmann, from Trans. Acad. Sci., St. Louis, Vol. III., Dec. 1875, with fine photographs of *A. Shawii*, a new species, and "one of the most striking and beautiful." Sixteen species are described, all but three found in the United States, and six or seven new to science. There are others in Mexico and, perhaps, a few in the West Indies and South America. Those who have the opportunity to observe the various stages of the flowers of species of *Agave*, should communicate with Dr. Engelmann, as there are several points that need elucidation, the hour when the anthers shed their pollen, the expansion of the stigmas, secretion of honey, etc. *Agave Virginica* seems to be the only one that he has had the opportunity of observing on these points.—4. *The American Journal* for July, among its botanical notes, has an interesting account by Dr. Gray of *Heteromorphism in Epigæa*. Fruit is seldom met with. There are four kinds of flower; the first, with long style and perfect stigma, the second, with perfect stigma likewise, but shorter style. From the first came the fruiting specimens received. Both have more or less abortive anthers lower than the stigmas. These two forms amounted together to less than 20 per cent. of a large number of specimens from one locality in Maine. In the third form, with longer style like No. 1, but imperfect stigma, the anthers abound with pollen and are dehiscent at or a little before the opening of the corolla. The fourth has a shorter style with the imperfect stigma as low as the base of the five longer anthers. Otherwise as in No. 3. "The flowers of *Epigæa* may therefore be classified into two kinds, each with two modifications; the two main kinds characterized by the nature and perfection of the stigma, along with more or less abortion of the stamens; their modifications, by the length of the style. The first is leading to dioecism, the second points to dimorphism,"—a singular fact among *Ericaceæ*, which usually secure intercrossing by dichogamy, *i. e.*, by developing the anthers before or after the stigma; of this Dr. Gray finds no indi-

cation in *Epigæa*. It is uncertain whether the small stigma forms "are ever fruitful or fully so." As the style and stigma seem to persist this might be ascertained. Fruiting specimens should be sent to Dr. Gray.—5. *Botanical Bulletin*, John M. Coulter, Hanover, Ind. The numbers of this enterprising little publication come promptly at the beginning of each month. The editor announces for the second volume, beginning in November, a change of name to avoid confusion with that of our BULLETIN. The *Botanical Gazette* will contain eight pages monthly at one dollar a year, and has the promise of assistance from well known botanists.—6. *Field and Forest*, Vol. II, No. 1, C. R. Dodge, Editor, P. O. Box, 273, Washington, D. C. The July No. begins a new volume, with an increased number of pages, 18. The *Flora Columbiana* in the August No. is brought down to *Scrophulariaceæ*. Robert Ridgway gives proof that the *Catalpa* is a native of the Wabash Valley, Ill.—7. *American Naturalist*, July. Dr. Gray gives the diagnosis of the species of *Schœnolirion*. The re-discovery by Dr. Wm. T. Feay of Savannah, of Michaux's *Phalangium croceum* has led Dr. Gray to distinguish Torrey's *S. Michauxii* into three species; *S. croceum*, Gray; *S. Elliottii*, Feay; *S. Texanum*, Gray. In the August No., Dr. Gray has an article on *Acnida*, including *Montelia*. Botanists along and near the seaboard are particularly requested to examine the species they meet with, and to send good fruiting specimens to him. The distinctions between *A. cannabina*, L., and *A. rhyssocarpa* (*rusocarpa*) Mchx., should be especially looked after. The fruit of the former is hardly to be found in any of our larger herbaria. Its stigmas are very long and filiform almost plumosely hairy, while those of *A. rhyssocarpa* are comparatively short with utricle rugose. Florida and Western fruiting specimens of any *Acnida* are much desired. Another station for *Calluna vulgaris* has been found, five miles north of the Tewksbury one.—8. *Transactions of the Mass. Hort. Soc.*, 1876, Part I., full of interesting discussions on the cultivation of plants, and the value of special herbaria.—10. *Psyche*, March—June. Contains as usual its excellent bibliographical record, and commences a series of Synoptical tables for determining N. A. insects, beginning with Orthoptera.—11. *The Naturalist's Advertiser*, July, Salem, Mass., gives notice of a proposed new Directory of Naturalists.—12. *Connecticut Valley Botanical Society*. The Springfield Republican of June 14th gives an account of the meeting at Hanover, N. H., in June. Judging from the subjects appointed for the next meeting, there appears to be a great deal of vitality in this association.—13. *Mycotheca Universalis*, by F. de Thümen, Bayreuth, Bavaria. The third century of this work is now issued and contains, among other things of interest, a fine specimen of *Cyttaria* from Tasmania, and several species from the Cape of Good Hope, among which a new *Æcidium*, *A. ornamentale*, Klehbr., is very fine, the volume also contains representatives of American and British fungi, and in interest is fully equal to its predecessors, *J. B. E.*—14. The Club is indebted to Dr. G. E. Post, of the Protestant College, Beirut, Syria, for a copy of his Botanical Manual in Arabic prepared for the use of the

students of that College. Dr. Post was formerly one of the fraternity in this city, and was the first to detect *Frangula* in the Hackensack marshes.

§ 104. **New Localities.** We found this spring another spot where *Viola rotundifolia*, Mchx., grows in this neighborhood, in the wood back of Tenafly, not far from the river front of the Palisades. This is a southern outpost of Mr. Austin's Closter locality, (BULLETIN, I. 38.) It was found years ago on the banks of the Harlem River, Morrisania, and later on the banks of the Whippany, N. J. These seem its southern limits on the coast. *Ranunculus Cymbalaria*, Pursh, grows in the overflowed flats back of the third landing on Rockaway Beach. *Melilotus officinalis*, Willd., begins to show itself on the railroad near Carmansville. Mr. Wilber reports *Sisymbrium Alliaria*, Koch, abundant near Irvington. *Mulva parviflora*, L., was found in October, 1874, by Mr. David F. Day at Wellsboro, Pa., thoroughly established in roadsides, gardens and waste places. Rev. Hermann Wibbe found a year ago near Nassau Village, Rensselaer Co., N. Y., *Azalea viscosa*, L., but this has been found further north and west, vid. Payne's Cat. Near the same village Mr. Wibbe found *Gypsophila muralis*, L., quite naturalized in middle of the road, and in dry barren places in the adjacent fields; also in the streets of Oswego. This is cultivated for borders, from which it has escaped. Mrs. L. A. Millington found a year ago on the western shore of Lake Champlain *Betonica grandiflora*, Spreng. There were two or three scattered tufts growing in the sandy hollows along the rocks of a lonely bay, evidently floated there at high water. They had only a few flowers at the top of the stalk instead of the abundance in garden plants. They were in company with Germander (*Teucrium*), *Potentilla Anserina*, L., and *Ranunculus multifidus*, Pursh, seemed thoroughly at home and likely to thrive. Mrs. M. adds that *Tragopogon pratense*, L., is thoroughly naturalized about Glens Falls. Mr. W. W. Bailey, of Providence, R. I., says that *Ægopodium podagraria*, L., which according to Darlington is a nuisance in some parts of Pennsylvania, has grown for a long time on the back campus of Brown University, where he first found it in 1863. It seems to be completely naturalized, and to be slowly spreading, vid. BULLETIN II., 28; III., 36.

§ 105. **The Oaks of the United States.**—This is a title of a paper read before the Academy of Science of St. Louis, March 20, by Dr. Geo. Englemann. It is not a description of the species, but a classification of them, with a general account of the characters useful for this purpose, and of the synonyms. The White-oaks are distinguished from the Black by the color of the bark, and the tougher, heavier, and more compact wood. The wood of the Black-oaks is brittle and porous, makes poorer firewood, and, made into barrels, holds only dry substances. In them the scales of the acorn-cup are never thickened at the base. The annual rings show that the Oak grows as rapidly in age as in youth, or even more rapidly. The winter-buds, the veneration and venation of the leaves, and the presence (chiefly on the young leaves) of articulated hairs of several